### **REMARKS**

Reconsideration of this application, as amended, is respectfully requested.

## Status of related applications

The Applicants wish to draw the Examiner's attention to the Applicants' related co-pending applications and issued patents (see Appendix A) directed to nanoparticles and methods of preparation and use thereof. One or more office actions have already issued in many of the listed cases.

#### Status of the Information disclosure statements

The Applicants note that the Examiner still did not return the executed PTO 1449 form for the 6<sup>th</sup> Supp. Information Disclosure Statement (IDS) that was hand-delivered to the Examiner on September 9, 2002. A copy with the IDS with associated PTO 1449 form and a PTO stamped return postcard was attached to the Applicants' response to the prior Office Action dated May 29, 2003. A second copy of the aforementioned documents is attached. The Applicants request that the Examiner fully execute the PTO 1449 form for the 6<sup>th</sup> Supp. IDS and return a copy of the executed PTO 1449 form to the Applicants' undersigned representative. The Examiner is requested to contact the undersigned representative if the Examiner would like to have another copy of the references.

# Status of the claims

Claims 599-648 are pending in this application. Claims 599 and 620 were amended to further correct for obvious typographical errors. No new matter has been introduced into the application as a result of the present amendment. The Applicants respectfully submit that the amendment does not raise new issues and would not require any burdensome search to be performed by the Examiner. The Applicants further submit that the amendment places the claims into condition for allowance or in better form for consideration on appeal.

## Rejection under 35 U.S.C. section 112, second paragraph

Turning now to the Office action, claims 599-606 and 614-648 stand rejected under 35 U.S.C. section 112, second paragraph, for indefiniteness. Claims 607-613 were found to be allowable. The Examiner alleged that claim 599 recites a limitation for which there is insufficient antecedent basis in the claim. In view of the aforementioned amendment to the claim, the Applicants respectfully submit that

the rejection is now moot. Withdrawal of the section 112, second paragraph, rejection against claims 599-606 and 614-648 is in order and is respectfully requested.

# **Conclusion**

The Applicants thank the Examiner for the allowance of claims 607-613. The Applicants, however, respectfully submit that all of the remaining claims 599-606 and 614-648 in this application are also in allowable condition. A Notice to this effect is respectfully requested.

Reconsideration of this application is respectfully requested and a favorable determination is earnestly solicited. The Examiner is invited to contact the undersigned representative if the Examiner believes that this would be helpful in expediting the prosecution of this application.

Emily Miao Reg. No. 35,285

Respectfully submitted,

McDonnell Boehnen Hulbert & Berghoff LLP 300 South Wacker Drive Chicago, IL 60606

Telephone: 312-913-0001 Facsimile: 312-913-0002

# APPENDIX A

ATTY	Serial No./	T -	
Case No.	Filing Date	Inventors/Title	Status
00-653-G	U.S. 10/794,741 Filed 3/5/04	Mirkin, Letsinger, Mucic, Storhoff, Elghanian, Taton, Garamella, Li, Park/ NANOPARTICLES HAVING OLIGONUCLEOTI DES ATTACHED THERETO AND USES THEREFORE	ALLOWED
00-713-B1	09/923,625 Filed 8/7/01	Mirkin, Letsinger, Mucic, Storhoff, Elghanian/ NANOPARTICLES HAVING OLIGONUCLEOTI DES ATTACHED THERETO AND USES THEREFOR	ALLOWED
00-713-C	09/344,667, filed 6/25/99	Mirkin, Letsinger, Mucic, Storhoff, Elghanian/ NANOPARTICLES HAVING OLIGONUCLEOTI DES ATTACHED THERETO AND USES THEREFORE	U.S. Patent No. 6,361,944, issued 3/26/02
00-713-I	U.S.S.N 09/603,830 Filed 6/26/00	Mirkin, Letsinger, Mucic, Storhoff, Elghanian, Taton; NANOPARTICLES HAVING OLIGONUCLEOTI DES ATTACHED THERETO AND USES THEREFOR	U.S. Patent No. 6,506,564, issued 1/14/03
00-713-I-1	09/961,949 9/20/01	Mirkin, Letsinger, Mucic, Storhoff, Elghanian, Taton;	U.S. Patent No. 6,582,921, issued June 24, 2003

ATTY	Serial No./		
Case No.	Filing Date	Inventors/Title	Status
		NANOPARTICLES	
	1	HAVING	
		OLIGONUCLEOTI	
		DES ATTACHED	
		THERETO AND	
		USES THEREFOR	
00-713-I-2	09/957,318	See 00-713-I-1	U.S. Patent No.
	9/20/01		6,759,199, issued
			7/6/04
00-713-I-3	09/957,313	See 00-713-I-1	U.S. Patent No.
	9/20/01		6,645,721, issued
			11/11/03
00-713-I-4	09/966,491	See 00-713-I-1	U.S. Patent No.
	9/28/01		6,610,491, issued
			August 26, 2003
00-713-I-5	09/966,312	See 00-713-I-1	U.S. Patent No.
	9/28/01		6,673,548, issued
			January 6, 2004
00-713-I-6	09/967,409	See 00-713-I-1	U.S. Patent No.
	9/28/01		6,740,491, issued
			May 24, 2004 .
00-713-I-7	09/974,500	See 00-713-I-1	U.S. Patent No.
	10/10/01		6,709,825, issued
			March 23, 2004
00.512.1.0	00/07/ 007	G 00 510 X 1	
00-713-I-8	09/974,007	See 00-713-I-1	PENDING
	10/10/01		
00.712.1.0	00/072 629	C 00 712 T 1	ALLOWED
00-713-I-9	09/973,638	See 00-713-I-1	ALLOWED
	10/10/01		
00-713-I-	09/973,788	See 00-713-I-1	U.S. Patent No.
10	10/10/01	366 00-713-1-1	6,720,411, issued
10	10/10/01		1 1 1
00-713-I-	09/975,062	See 00-713-I-1	April 13, 2004 U.S. Patent No.
11	10/11/01	500 00-715-1-1	6,677,122, issued
4.4	10/11/01		January 13, 2004
			January 13, 2004
00-713-I-	09/975,376	See 00-713-I-1	PENDING
12	10/11/01		
_ <b>_</b>			
00-713-I-	09/975,384	See 00-713-I-1	PENDING
13	10/11/01		
		<u> </u>	

ATTY	Serial No./		rag
		T 4 //D:41	04.4
Case No.	Filing Date	Inventors/Title	Status
00-713-I-	09/975,498	See 00-713-I-1	ALLOWED
14	10/11/01		
00-713-I-	09/975,059	See 00-713-I-1	ALLOWED
15	11/11/01	866 00-715-1-1	ALLOW LD
13	11/11/01		
00 710 7	00/07/ (01	G 00 710 V 1	757575
00-713-I-	09/976,601	See 00-713-I-1	PENDING
16	10/12/01		
00-713-I-	09/976,968	See 00-713-I-1	ALLOWED
17	10/12/01		*
00-713-I-	09/976,971	See 00-713-I-1	U.S. Patent No.
18	10/12/01	366 00-713-1-1	
10	10/12/01		6,682,895, issued
20.712.7	00/07/0/0		1/27/04
00-713-I-	09/976,863	See 00-713-I-1	PENDING
19	10/12/01		
00-713-I-	09/976,577	See 00-713-I-1	U.S. Patent No.
20	10/12/01		6,720,147, issued
			April 13, 2004
00-713-I-	09/976,618	See 00-713-I-1	ALLOWED
21	10/12/01	See 00-713-1-1	ALLOWED
21	10/12/01		
00 510 7	00/001 011		
00-713-I-	09/981,344	See 00-713-I-1	U.S. Patent No.
22	10/15/01		6,777,186, issued
			August 17, 2004
00-713-I-	09/976,900	See 00-713-I-1	ALLOWED
23	10/12/01		
00-713-I-	09/976,617	See 00-713-I-1	U.S. Patent No.
24	10/12/01	300 00-713-1-1	6,730,269, filed
24	10/12/01		1 ' ' '
			May 4, 2004
	00/07/07/07		
00-713-I-	09/976,378	See 00-713-I-1	PENDING
25	10/12/01		
00-713-i-	10/410,324	See 00-713-I-1	PENDING
26	04/10/03		
00-713-L	U.S.S.N.	Mirkin, Letsinger,	U.S. Patent No.
30 / IO-II	09/693,005	Mucic, Storhoff,	6,495,324, issued
	,		
	Filed 10/20/00	Elghanian/	12/17/02

ATTY	Serial No./		1 ago
Case No.	Filing Date	Inventors/Title	Status
	<b>g</b>	NANOPARTICLES HAVING OLIGONUCLEOTI DES ATTACHED THERETO AND USES THEREFORE	
00-713-М	U.S.S.N. 09/693,352 Filed 10/20/00	Mirkin, Letsinger, Mucic, Storhoff, Elghanian/ NANOPARTICLES HAVING OLIGONUCLEOTI DES ATTACHED THERETO AND USES THEREFORE	U.S. Patent No. 6,417,340, issued 7/9/02
00-714-G	U.S. 09/830,620 Filed 8/15/01	Mirkin, Nguyen/ NANOPARTICLES WITH POLYMER SHELLS	PENDING
00-715-A	U.S. 09/760,500 Filed 1/12/01	Mirkin, Letsinger, Mucic, Storhoff, Elghanian, Taton; Garamella, Li/ METHOD OF ATTACHING OLIGONUCLEOTI DES TO NANOPARTICLES AND PRODUCTS PRODUCED THEREBY	U.S. Patent No. 6,767,702, issued July 27, 2004
00-715-В	U.S. 10/716,829 Filed 11/18/03	Mirkin, Letsinger, Mucic, Storhoff, Elghanian, Taton; Garamella, Li/ METHOD OF ATTACHING OLIGONUCLEOTI DES TO NANOPARTICLES AND PRODUCTS PRODUCED THEREBY	Pending
00-1085-A	U.S.S.N.	Mirkin, Letsinger,	U.S. Patent No.

ATTY	Serial No./		rag
Case No.	Filing Date	Inventors/Title	Status
	09/820,279	etc./ METHOD AND	6,750,016, issued
	Filed 3/28/01	MATERIALS FOR	June 15, 2004
		ASSAYING	
		BIOLOGICAL	
		MATERIALS	
00-1085-G	U.S.S.N.	Mirkin, Letsinger,	Pending
	10/640,618	etc./ METHOD AND	*
	Filed 8/13/03	MATERIALS FOR	
		ASSAYING	
		BIOLOGICAL	
		MATERIALS	
00-1086-A	U.S. 09/903,461	Letsinger, Garimella/	U.S. Patent No.
	Filed 7/11/01	METHOD OF	6,602,669,
		DETECTION BY	Filed 8/5/03
		ENHANCEMENT	
		OF SILVER	
		STAINING	
00-1272-С	U.S.S.N.	Mirkin, Letsinger,	PENDING
	10/008,978	Mucic, Storhoff,	
	Filed 12/7/01	Elghanian, Taton,	
		Garimella, Li, Park,	
		Lu/	
		NANOPARTICLES	
		HAVING	
		OLIGONUCLEOTI	
		DES ATTACHED	
		THERETO AND USES THEREOF	
01-565-A	USSN 10/125,194	Mirkin, Nguygen,	PENDING
01-303-A	Filed 4/18/02	Watson, Park/	FENDING
	1 1104 4/10/02	OLIGONUCLEOTI	
		DE-MODIFIED	
		ROMP POLYMERS	
		AND CO-	
		POLYMERS	
01-599-A	U.S.S.N.	Storhoff/NOVEL	PENDING
	10/291,291	THIOL-BASED	
	Filed 11/08/02	METHOD FOR	
		ATTACHING	
		OLIGONUCLEOTI	
		DES TO	
		NANOPARTICLES	
01-661-A	U.S.S.N.	Mirkin, Cao, Jin/	PENDING
	10/034,451	DNA-MODIFIED	

ATTY	Serial No./		1 ago
Case No.	Filing Date	Inventors/Title	Status
	Filed 12/28/01	CORE-SHELL AG/AU	
		NANOCRYSTALS	
01-661-C	U.S.S.N.	Mirkin, Cao, Jin/	PENDING
ĺ	10/153,483	DNA-MODIFIED	
	Filed 5/22/02	CORE-SHELL	
		AG/AU	
		NANOCRYSTALS	
01-661-E	U.S.S.N.	Mirkin, Cao, Jin/	PENDING
	10/397,579	DNA-MODIFIED	
	3/26/03	CORE-SHELL	
		AG/AU	
		NANOCRYSTALS	
01-1565-A	U.S.S.N.	Park, Taton,	PENDING
	10/266,983	Mirkin/ARRAY-	
	Filed 10/08/02	BASED	
		ELECTRICAL	
		DETECTION OF	
		DNA USING	
		NANOPARTICLE	
01 1 (22 )	HOON	PROBES	DET TO 10
01-1633-A	U.S.S.N.	Park, Taton,	PENDING
	10/266,983 Filed 10/8/02	Mirkin/NANOPARI CLES HAVING	
	Filed 10/8/02	OLIGONUCLEOTI	
		DES ATTACHED	
		THERETO AND	
		USES THEREFOR	
01-1705-A	U.S.S.N.	Nam, Park,	PENDING
01 1/00 11	10/108,211	Mirkin/BIO-	
	Filed 3/27/02	BARCODES	
		BASED ON	
		OLIGONUCLEOTI	
		DE-MODIFIED	
		NANOPARTICLES	
02-338-В	USSN 10/172,428	Cao, Jin, Nam,	PENDING
	Filed 6/14/02	Mirkin/MULTICHA	
		NNEL DETECTION	
		USING	
		NANOPARTICLE	
		PROBES WITH	
		RAMAN	
		SPECTROSCOPIC	·
		FINGERPRINTS	<u>-</u>

ATTY	Serial No./		rag
Case No.	Filing Date	Inventors/Title	Status
02-338-C	10/431,341	Cao, Jin, Nam,	PENDING
	5/7/03	Mirkin/MULTICHA	
		NNEL DETECTION	
		USING	
		NANOPARTICLE	
		PROBES WITH	
		RAMAN	
		SPECTROSCOPIC	
		FINGERPRINTS	
02-1227-A	10/735,357	DIRECT SNP	PENDING
	Filed 12/12/03	DETECTION WITH	
		UNAMPLIFIED	
		NUCLEIC ACID	
		USING	
		NANOPARTICLE	
		PROBES	
03-214-A	10/789,831	LABEL-FREE	PENDING
	Filed 2/27/04	GENE	
		EXPRESSION	
		PROFILING WITH	
		UNIVERSAL	
		NANOPARTICLE	
		PROBES IN	
		MICROARRAY	
	10/07/10/10	ASSAY FORMAT	W-70.
03-466 <b>-</b> C	10/854,848	METHOD FOR	PENDING
	Filed 5/27/04	DETECTING	
		ANALYTES	
		BASED ON	
		EVANESCENT	
		ILLUMINATION	
		AND SCATTER-	
		BASED DETECTION OF	
		NANOPARTICLE	
		PROBE	
		COMPLEXES	i
03-666-E	10/877,750	BIOBARCODE	PENDING
05 000-E	Filed 6/25/04	DIODIROODE	ILITINI
		L	